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ABSTRACT

Over 50 educational leaders representing academic and vocational-technical interests met for a 3-day conference to identify curriculum needs and techniques used in curriculum development and to suggest curriculum priorities and coordinated projected plans to attain recommended goals. Conference objectives were accomplished through small group discussions and these major presentations: (1) "Techniques in Curriculum Development" by H. Bruce, (2) "The Development of a Statewide Curriculum in Office Occupations" by L. Robinson, (3) "The Curriculum Coordinating Unit for Vocational-Technical Education in Mississippi" by J.E. Wall, and (4) "A Suggested Curriculum Development Approach for Tennessee" by L. Bevins. Some priorities resulting from the conference were: (1) to establish performance criteria by job title in all service areas, (2) to establish a total career development program for vocational-technical education, (3) to define the role of participants in the curriculum development process, and (4) to develop a curriculum by service area which lends itself to a system of flexible scheduling. Conference-related materials and texts of the major presentations are appended. (SB)

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INFORMATION SERIES NO. 4

ED 058453

on curriculum development in vocational-technical education

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DIVISION OF VOCATIONAL-TECHNICAL EDUCATION
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UNIVERSITY OF TENNESSEE COLLEGE OF EDUCATION

ED 058453

Statewide Invitational Conference

on

Curriculum Development

in

Vocational-Technical Education

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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State Vocational Curriculum Laboratory

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The Tennessee Research Coordinating Unit

University of Tennessee College of Education

Henry Horton State Park

Chapel Hill, Tennessee

March 1-3, 1971

PREFACE

At a statewide invitational conference on research priorities in vocational-technical education, participants identified curriculum development as one of the areas in critical need of research and development in the State of Tennessee. As a result of that conference, a second invitational conference was called to formulate plans to help move toward meeting the curriculum development needs in the State of Tennessee.

Over fifty educational leaders representing academic and vocational-technical interests met to join hands and make inputs on how to approach our curriculum development problems. This report is a brief summary of that conference.

Vocational-technical educators are truly indebted to all those individuals who took time from their busy schedules to participate in the conference. Special thanks are due to Mr. Thomas Kirkpatrick, Graduate Research Assistant, who was primarily responsible for organizing and conducting the conference, Mr. James Patton and Miss Lucy Robinson for their efforts in compiling this report, Mrs. Dolores Wilder, information Specialist at the RCU, for overseeing the production and dissemination of this report, and the clerical and supporting staff for the actual typing and production of the report.

Lynn G. Bevins, Director
Vocational Curriculum Laboratory

Garry R. Bice, Director
Research Coordinating Unit

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CONFERENCE REPORT
STATEWIDE INVITATIONAL CONFERENCE
ON
CURRICULUM DEVELOPMENT

INTRODUCTION

Curriculum development was identified as the area of immediate attention among a list of research priorities in vocational-technical education in Tennessee. The Research Coordinating Unit and the State Vocational Curriculum Laboratory were designated for planning and implementing a Statewide Invitational Conference on Curriculum Development. The purposes of this conference were to:

- Identify specific curriculum needs in vocational-technical education.
- Identify various techniques utilized in curriculum development.
- Suggest curriculum priorities among immediate and long-range needs.
- Suggest coordinated projected plans to attain recommended curriculum goals.

Selected vocational-technical personnel were contacted and requested to nominate individuals within the state to participate in the curriculum development conference. The group of vocational-technical leaders selected to make the nominations included the following:

Mr. Charlie Dunn
Dr. Nell P. Logan
Mr. Lynn G. Bevins
Dr. Carroll B. Coakley
Mr. Charlie B. Hale
Mr. L. L. Hyke
Mr. Guy E. Phipps
Mr. W. A. McGinnis

In addition to nominating participants, the committee was requested to review the tentative program and make suggestions for improvement in terms of organization, content, and possible speakers (see Appendix A). It was tentatively planned to invite approximately 45 persons to the conference.

The nominating ballot suggested that a specific number of participants from the following vocational-technical areas should be nominated:

Local Directors of Vocational Education
Representatives of Technical Institutes
Representatives of Area Schools
Representatives of Community Colleges
Teacher Educators
Supervisors
High School Principals
School Superintendents
Guidance Personnel
Representatives of the State Department
of Education (Division of Instruction)
State Advisory Council for Vocational Education

When the nominating ballots were returned to the Research Coordinating Unit, a list of nominees was recorded and they were contacted to determine whether they would attend the conference. A final list of participants appears in Appendix B.

THE CONFERENCE

Henry Horton State Park, Chapel Hill, was the site of the conference on March 1-3, 1971. Approximately fifty participants representing most of the service areas in vocational-technical education attended the opening session presided over jointly by Dr. Garry R. Bice, Director of the Tennessee Research Coordinating Unit, and Mr. Lynn Bevins, Director, Vocational Curriculum Laboratory, Murfreesboro. Following an explanation of the purposes and objectives of the conference, the first keynote speech as presented by Dr. Herbert Bruce, Director, Instructional

Materials Laboratory, University of Kentucky, Lexington (see Appendix C).

Dr. Bruce defined curriculum as "the sum total of the learning experiences for which the school has responsibility." He indicated that the definition should be considered in terms of the educational needs and experiences of students.

Singling out some of the danger signals in our society that point to the need for curriculum change - unemployment, lack of skills among the unemployed, failure of the schools to provide desired vocational and technical education - Dr. Bruce outlined eight steps in curriculum development that should bring about desired changes. A series of transparencies was utilized in presenting the following eight steps:

1. Identify occupations or curriculum element.

2. Develop and validate occupational analysis.

3. Develop objectives.

4. Write and arrange in sequence the major objectives.

5. Develop alternative activities to accomplish minor objectives.

6. Schedule activities. Once the overall objective is established, break it down into smaller parts--and when parts have been examined, major goals or objectives have been accomplished.

7. Coordinate with other curriculum elements. Determine what is offered in other areas of the educational system. How do these areas help in vocational education?

8. Identify, select, and use appropriate media, materials and facilities.

Summarizing, Dr. Bruce stated that "with educators representing different segments of vocational education working together

to plan curricula and curricular materials to meet the needs of students, the result, hopefully will be a better plan for vocational education than we now have. The plan should provide for joint decisions by teachers and students in selecting, arranging, and sequencing those experiences that result in learning and the translating of these into behaviorally stated performance goals."

Small Group Discussions

The conference participants were assigned to small groups for the purpose of discussing the curriculum needs for vocational-technical education in Tennessee as they related to the keynote address. Reports of the groups were combined because they discussed and summarized similarly.

It was recommended that a curriculum coordinating unit be organized and located at Murfreesboro since it is a central location and the capital outlay would be less because of existing facilities. The purpose of the unit will be the developing and disseminating of curriculum materials. A further recommendation was that the unit should be staffed with qualified personnel in all the service areas.

From these small group discussions came a unanimous recommendation that the State take steps to establish and fund a curriculum coordinating unit, the functions of which would be:

1. To draw together all units and/or agencies now involved in curriculum development, evaluation, and research.

2. To employ the necessary personnel in all service areas; and evaluate existing materials.

3. To disseminate available materials.

Presentations

Following a break for dinner, the participants assembled once more for two presentations. Dr. Herbert Bruce, Director, Instruc-

tional Materials Laboratory, spoke of three things involved in the Kentucky plan for establishing a curriculum coordinating unit:

1. Determination of programs. This involves utilization of key leaders in the region in which the program is being planned. Training programs need to be implemented to train people for vocational work if none is available in the planning region. There then needs to be a survey of student interests. Also survey the community and surrounding areas to have them identify areas of need and interest. All of this information is collected and then given to a committee which devises programs needed and alternatives. Perhaps included here should be two other important and determining factors: those being facilities (Are the available facilities suitable to support the programs which are needed?), and personnel (Are competent personnel available?).

2. Development of curriculum. The curriculum planning should include things that you can see a student needs in order to come out with the competencies required to fill the positions that are available in the world of work. The time of the program and what is needed are important coordination factors. People who should be involved in curriculum planning are teachers, regional superintendents, coordinators, state directors, program planning development and implementation groups, and instructional materials specialists.

3. Determination of instructional materials needed. People who are to implement the programs need to be involved. Materials from all over the state need to be collected and made available for dissemination anywhere in the state. Also the state RCU holds workshops in areas of need so that the expertise of all regions can come to bear on a problem. In Kentucky, an instructional materials lab is maintained and it is a cooperative effort involving all people in the Kentucky Vocational Education Program. It operates as a central storage and dissemination center.

Speaking last, Lucy C. Robinson, Research Assistant, Tennessee RCU, and on leave from the Florida Department of Education,

discussed "The Development of a Statewide Curriculum in Office Occupations," (see Appendix D) stating "curriculum development based on employment needs is the essence of effective payroll education for the youth and adults in today's 'real world'." Describing some of the problems related to curriculum development, Miss Robinson indicated that many of our problems appear to be more in the nature of variety, scope, and sequence. As orientation and informational programs are developed at the elementary and junior high levels, the need for articulation between levels and all instructional areas will increase, and as articulation between levels takes place, it will reflect the type and structure of programs needed for the prevocational, secondary, post-secondary, and adult levels.

A second problem is the need to get away from training for single job titles. There is a need to develop instructional programs for occupations which fall within clusters—in the sense that the skills and knowledges required in one occupation relate in some way to the competencies required in another occupation within the same cluster. Occupational groups of job titles should be identified with the data gathered in occupational studies.

A third problem is the necessity of establishing hierarchial patterns which will enable students to move from low to high levels of difficulty within a sequence of courses leading to an occupational choice, or between clusters of occupational titles. Students should be given the assurance that they may move to the next highest level of difficulty, in an occupational sequence of their choosing, without having to start over—whether they remain in one sequence, change job choice, or change to another institution.

In summary, Miss Robinson stated that "instructional programs based upon the recognition and acceptance of common elements within a family or cluster of occupations should lead not only to increased efficiency in the total instructional enterprise, in terms of maximum utilization of expensive facilities and instructor personnel, but should provide for each worker a pattern of flexibility that should enable him to make adjustments to the rapidly changing occupational requirements. Hopefully,

instructional programs developed both qualitatively and quantitatively within the context of a sequentially ordered curriculum will enable vocational educators to reach out to meet and serve the needs and abilities of people, all people, throughout their total life span. This is what curriculum development is all about!''

The second day of the conference featured a presentation by Dr. James E. Wall, Assistant Dean for Research and Development, Mississippi State University. He described the mission of the Curriculum Coordinating Unit for Vocational-Technical Education in Mississippi as being the diffusion of better vocational information; building better vocational programs; developing and disseminating curriculum plans and instructional materials.

Dr. Wall indicated that in making the selection of teachers, administrators, and others to work on curriculum development, they are more concerned with individual expertise than degrees or credit hours.

From Dr. Wall's description, the CCU in Mississippi is basically designed the same as the RCU in Tennessee (see Appendix E). It has service, research, and teaching responsibilities which are met through performance of the following major functions:

1. To establish and coordinate a leadership structure for determining priorities in curriculum development.

2. To provide innovative leadership for inventing solutions to curriculum problems.

3. To design, order, and systematize component parts of curriculum programs.

4. To provide leadership for diffusion, dissemination, and demonstration of curriculum programs.

5. To provide leadership for evaluation of curriculum programs.

6. To provide communication and 'feedback' structure between local school curriculum practitioners and curriculum developers in the CCU.

7. To maintain intensive interaction with the research and development activities of the Research Coordinating Unit.

The CCU also has other teaching responsibilities inasmuch as most of its staff members have professional teaching positions in the departments of their respective specialities.

Dr. Wall outlined two options to consider in establishing a CCU each describing organization, functions, staffing and roles, supportive staff and roles, ancillary services, priority determination, and evaluative criteria.

Summarizing, Dr. Wall stated "in the final analysis curriculum development and instructional materials development must, of necessity, be a personalized, people programmed type of thing. It would follow then, that a Curriculum Coordinating Unit must also be the same—individualized, flexible, functional—in order to best meet the needs of the people it serves."

NOTE: Dr. Wall distributed handouts of schematics depicting the articulation of vocational-technical education by service areas in Mississippi. A set of these is on file at the Tennessee Research Coordinating Unit.

Mr. Lynn Bevins, Director, Vocational Curriculum Laboratory, Murfreesboro, spoke last on "A Suggested Curriculum Development Approach for Tennessee." In a transparency presentation (see Appendix F), Mr. Bevins discussed factors to be involved in curriculum development: type of program, total school offerings, available teachers, performance goals, materials needed, and steps in the 3-D process—development, diffusion, dissemination. He indicated that the evaluation process should be continued.

The third and final day of the conference was devoted to small group discussions and report-out general sessions at which time the groups were to identify curriculum priorities for Tennessee and suggest ways to accomplish these research needs for curriculum development.

Priorities listed were:

1. To establish performance criteria by job title in all service areas.

2. To establish a total career development program for vocational-technical education in Tennessee.

3. To plan the related studies supporting all instructional programs in vocational-technical education.

4. To anew, restructure, and evaluate the trade and industrial education training program.

5. To define the role of participants in the curriculum development process.

6. To develop a curriculum by service area which lends itself to a system of flexible scheduling.

Last, to set the wheels in motion toward establishing a Curriculum Coordinating Unit in Tennessee, as recommended, the following volunteered to write the necessary proposal:

Mr. Lynn Bevins	Mr. James Marsh
Mr. Halton Charlton	Representatives from the State
Mr. G. G. Eichholz	Advisory Council (to be selected)

SUMMARY OF THE CONFERENCE

With this action taken, the fourth and final purpose for holding the first Statewide Invitational Conference on Curriculum Devel-

opment was accomplished. Having identified specific curriculum needs and listened to various techniques utilized in curriculum development, the participants suggested priorities among immediate and long-range needs, and recommended a procedure for attaining these goals - establishing a Curriculum Coordination Unit for Tennessee.

APPENDICES

APPENDIX A

THE UNIVERSITY OF TENNESSEE
COLLEGE OF EDUCATION
KNOXVILLE, TENNESSEE 37916

TENNESSEE RESEARCH
COORDINATING UNIT FOR
VOCATIONAL EDUCATION
909 MOUNTCASTLE STREET
615-974-3338

January 30, 1971

To: Selected Vocational-Technical Leaders
From: G. R. Bice
Subject: Statewide Invitational Conference on Curriculum Development

A Statewide Invitational Conference to determine curriculum development in Vocational-Technical Education for the State of Tennessee, is being planned by the RCU. The Conference is tentatively scheduled for March 1-3, 1971, at Henry Horton State Park, Chapel Hill, Tennessee. Some of the purposes of the conference are to:

1. Identify state curriculum needs in Vocational-Technical Education.

2. Suggest priorities, delineating immediate and long-range needs.

3. Suggest coordinated program plans to attain projected curriculum goals.

Approximately 45 persons will be invited to participate in the conference. As a leader in Vocational-Technical Education in Tennessee, your assistance is needed to help provide the necessary inputs for a successful conference. Would you -

1. Review the tentative program (enclosed) and make suggestions for improving same, in terms of organization, content, and possible speakers.

2. Nominate people to attend the conference.

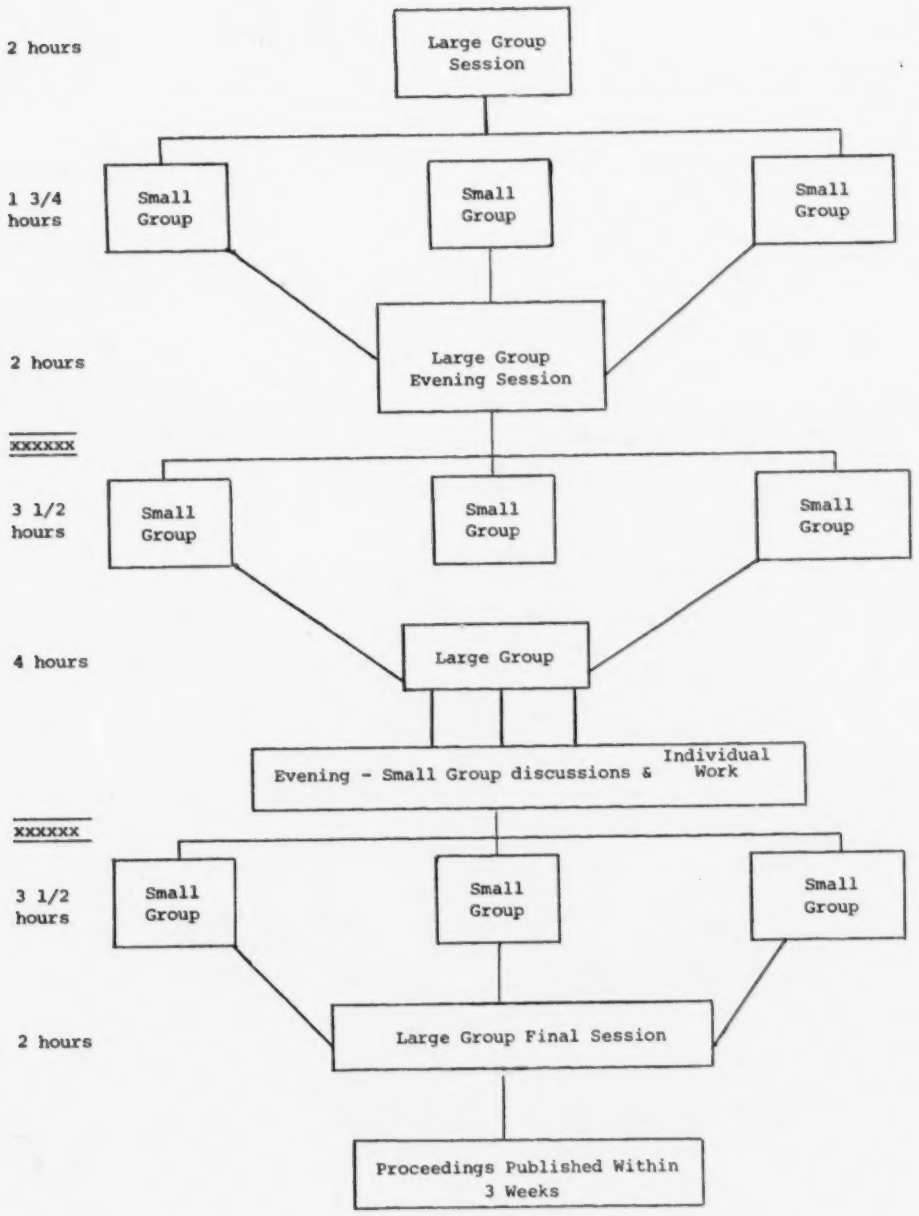
3. Return the ballot and program suggestions to the RCU by February 9. (Enclosed, self-addressed stamped envelope)

Your assistance with this matter will be greatly appreciated.

Distribution: Mr. Charlie M. Dunn
Dr. Nell P. Logan
Mr. Lynn G. Bevins
Dr. Carroll B. Coakley
Mr. Charlie B. Hale
Mr. L. L. Hyke
Mr. Guy E. Phipps
Mr. W. A. McGinnis

A UNIT SPONSORED COOPERATIVELY WITH THE STATE DIVISION OF VOCATIONAL EDUCATION

Schematic of Planned Activities



NOMINATING BALLOT

Suggested No. of People Needed	Representing this group	Suggested Names
4	Local Directors of Voc. Education	1. _____
		2. _____
		3. _____
		4. _____
3	Representatives of Technical Institutes	1. _____
		2. _____
		3. _____
4	Representatives of Area Schools	1. _____
		2. _____
		3. _____
		4. _____
3	Representatives of Community Colleges	1. _____
		2. _____
		3. _____
5	Teacher Education	1. _____
		2. _____
		3. _____
		4. _____
		5. _____
5	Supervisors	1. _____
		2. _____
		3. _____
		4. _____
		5. _____

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4	High School Principals	1. _____
		2. _____
		3. _____
		4. _____
3	School Superintendents	1. _____
		2. _____
		3. _____
4	Guidance Personnel	1. _____
		2. _____
		3. _____
		4. _____
2	Rep., Dept. of Educ., Div. of Instruction	1. _____
		2. _____
1	State Adv. Council for Voc. Education	1. _____
(?)	Other	_____
		_____
		_____
		_____
		_____

Statewide Invitational Conference on Curriculum Development

(TENTATIVE PROGRAM)

Monday March 1, 1971	1:00 - 2:00 p.m.	–	Welcome, Introductions, Purpose of Conference, etc.
	2:00 - 3:00 p.m.	–	Keynote Address (1) Articulate curriculum development from elementary school through community college level (2) Need for coordinated approach (3) Approaches to curriculum development (4) Importance of Priorities (5) Importance of Continuous Evaluation of Current and Future Programs (6) Other Suggested Speakers
YOUR HELP ! ! !	⟶		Others
	3:00 - 3:15 p.m.	–	Change to small groups
	3:15 - 3:30 p.m.	–	Break
	3:30 - 5:00 p.m.	–	Small Group Sessions (3 or 4 groups) Discuss Keynote Speech Identify need for changes in current curriculums Identify new area curriculum needs
	7:00 - 9:00 p.m.	–	(Optional Session) Techniques Utilized in Curriculum Development
YOUR HELP ! ! !	⟶		Speaker
			Techniques Utilized in Curriculum Evaluation
YOUR HELP ! ! !	⟶		Speaker
			Other Topics
Tuesday March 2, 1971	8:30 - 12:00 p.m.	–	Small Group Meetings Each group will develop curriculum needs with priorities suggested
	1:00 - 3:00 p.m.	–	Large group session Consolidate and identify curriculum objectives
	1:00 - 3:00 p.m. (con't)	–	Establish priorities Develop techniques to accomplish objectives
	3:00 - 5:00 p.m.	–	Small Group Sessions
Wednesday March 3, 1971	8:00 - 12:00 p.m.	–	Small Group Sessions Each group will refine suggested curricula for identified areas and discuss possible agencies capable of developing and/or constructing curricula.
	1:00 - 3:00 p.m.	–	Large Group Session Development of finalized plan of attack
	3:00 p.m.	–	Adjourn

APPENDIX B

LIST OF PARTICIPANTS

GROUP A

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GROUP B

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APPENDIX C

TECHNIQUES IN CURRICULUM DEVELOPMENT

Herbert Bruce, Jr.
Associate Professor
Instructional Materials Laboratory
University of Kentucky
Lexington

Paper Presented at the
Curriculum Conference

March 1-2, 1971
Henry Horton State Park
Tennessee

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TECHNIQUES IN CURRICULUM DEVELOPMENT

What I was asked to do tonight was to talk about techniques in curriculum development. What I plan to do is to discuss the techniques and procedures we use in Kentucky and some of them will probably be appropriate for you.

The three things that I want to discuss is to talk about how we determine programs. Secondly, how we develop curricula for those programs. And third, how we develop materials to go with the curriculum that is developed for a vocational program.

I think I will use an example that I can explain fairly easily. If a new area vocational school is built in Kentucky in an area where there is no school, there would be, of course, no program, no building, no personnel, etc. There are certain things which would be done. To begin with, I want to show you how our state is divided from the standpoint of vocational education.

We are divided into fifteen vocational regions. We have thirteen area vocational schools in fifteen regions. These thirteen area vocational schools serve as a home base or a planning base for the total area, regardless of whether the programs are in a vocational school or in a high school. Eventually there will be at least one extension center in every two counties. We have 120 counties in the state, so there will be an area vocational school or extension centers in every other county in the state.

There are certain key leaders who ought to be involved in curriculum planning and development. They are: the state director, materials specialist, teacher educators, and vocational teachers. These aren't the only people who should be involved in curriculum planning or in material development but these, in my opinion, are the key leaders who will make a contribution. The leadership should come from these people and from that point other people will be involved.

The next thing to be done in a state is to decide the status of the leaders who are available for curriculum development. If

leaders are not available, they should be trained or secured. Training professional personnel is important. This summer we sponsored a leadership development institute. Three people from your state attended that conference. As a result of the conference, they developed a plan for leadership development.

In order to come out with a finished product in vocational education, professional personnel in curriculum development and materials development must be available. If leadership is not exerted in the two areas listed, then do not expect strong vocational programs to exist.

Really, I think what I have to say tonight is around the following ideas. How do we develop programs? How do we develop curriculum and finally, how do we develop materials to support a program in vocational education? In Kentucky we have certain things that are pertinent. The first thing to do when going into an area where there is a new school is to get a survey of student interest. This can be done by getting high school teachers to find out what interests the students have. For post high school programs, in the area vocational schools, get people in the community from business and industry to help take a poll or survey to find out what interests people have as it relates to vocational programs.

Secondly, what kind of people need training? Some of this kind of information may come from student interest information. Look at the community and find out what jobs are available and the kind of people to be served. This information can be used for either an out of school program or a high school program. Based on these two things, then I think we have some basis for planning programs.

What kind of programs are needed in this school? In Kentucky in order to have an area vocational school there must be at least six different programs. The kind of program you want can be determined on the basis of the number of students, the students' interest, what business and industry thinks, and how many workers are needed. The number of programs needed can be determined on this basis. One must decide what is most appro-

priate. Be careful and do not add just any program. In Kentucky there are five or six programs that are normally available in the vocational schools. In some instances there are certain programs which are not needed but available and others are needed and not available. So do not just add any program. If it is needed, plan it. If it is not needed, leave it off.

Now in Kentucky these things are done. There is a program development and planning section in our state organization. This is made up of division directors. We have a director in charge of each vocational service. We have a director in agriculture, a director in home economics, a director in health occupations, etc. One or more division directors will go to a local area and sit down with local people to plan. Representatives from the different schools are selected. A principal from a high school, a school superintendent, a guidance counselor, and the area vocational school superintendent or director will form a planning committee. In each of these fifteen regions there is an area coordinator and that person is involved. Likely a school board member will be involved. One or more local teachers, a state representative (a person elected by the people who will have some impact on whether or not programs can be initiated or can be supported on a state level) and usually someone represents the labor union. This group makes up a planning committee that works with one or more state directors.

After the surveys of job opportunities, student interests, etc., this information and other available information are used as a basis to make a laundry list of the programs that could be offered. Then the committee attempts to determine, if possible, alternatives.

The next step is to look at restraints. In every state there are certain things that keep good vocational programs from being implemented. In fact, in every school system there are restraints and usually the first one is money. You remember we talked about that today. The need for money if programs are developed and carried out.

Facilities—are the available facilities suitable to support the

programs which are needed? Then for a new school, think through and build the kind of facility needed. Generally this is not done.

Personnel—do you have competent personnel available? If not where can these people be found. There are dozens of other things that will keep you from doing all the things that should be done. These should be considered too.

Then the local school superintendent of the area school evaluates the committee's recommendations and decides what programs to implement. In most instances the superintendent wants the programs that this committee suggests. If the money is available, if the personnel can be secured, and if facilities are adequate, the programs are implemented. This planning committee and especially the directors ask the superintendent what kind of program he and the local people want, how many they want, and where they will start?

After programs are selected the next step is to develop the curriculum and curriculum materials. I tried to point out at one o'clock today that you were to get equally involved and know what to do as to the kind of curriculum or experiences the students need relative to a particular program. So be careful, watch your step. Don't add experiences that will not be helpful. If possible, build into a curriculum things that you can see a student needs in order to come out with the competencies he needs to fill the positions that are available in the world of work. You know this is not easy. Certain kinds of people are needed today and in sixteen months, or 24 months from now, things may change and people with a little different background are needed. Attempt to build in the program, as much as you can, the kind of experiences you think they will need when they are employed. Determine how much time is available for a program. Now do not construct a curriculum that will require 36 months to finish when there are only 20 months available. Decide how much time you have, how much time can be devoted to different areas or segments of the curriculum and attempt to build this in the program. Again, this is not easy to do.

The people who should be involved are teachers, regional

superintendents, coordinators, state directors, program planning development and implementation groups and instructional materials specialists. In fact, a key person is the materials specialist because they have much to do with the kind of experiences students will have an opportunity to have. Instructional materials are developed for them in determining the experiences they make available to students.

What I know more about than any other area is how we in the Instructional Materials Lab work with other people in deciding on the kind of instructional materials needed for a vocational program. First of all, involve people who are to implement the program. Do we coordinate all of our instructional materials development with everybody in the state? And the answer is we do not do this all the time.

If more than one person in this state develops curriculum materials then they should get together and coordinate their work. A person on the state level should coordinate this work so that everyone involved will be working together. That includes all the groups that I have named.

In Kentucky there is a person who is in charge of all the supporting services in the state. This person works with teacher education, with the RCU and with curriculum development. If someone in teacher education is developing materials, then the personnel in the IML knows about it through this person. In fact, someone from the IML would likely help and when the material is finished, if they choose, it is disseminated through the Instructional Materials Lab. People in Kentucky are beginning to realize that if they want materials, it can be secured through the Instructional Materials Lab. These people must be willing to help one another, they must have the same objectives. When I say this I do not mean specific objectives, but I mean basically they must be working toward the same end. They should be concerned about programs in vocational education, and be interested in making materials available. There is a real need for cooperating. In Kentucky there is more work than everyone can do. When someone develops materials other interested people should know about it so they will not duplicate this effort.

What is the responsibility of each of these groups of people that I have designated as leaders? The State Directors work with the specialists in the Instructional Materials Lab. They call meetings or workshops involving the teachers. When materials are developed local teachers should be involved. The State Directors have the responsibility of calling the meetings. They have to administer programs on a state level. They have the authority to authorize travel and arrange for teachers to be away from their schools. The reason they have the right to do this is the area vocational schools are state controlled. The fact that vocational schools are state controlled may present some problems in other areas but it is good from this standpoint.

If we want to develop instructional materials in welding, the state director gets all the welding teachers together. Not long ago we had eighty welding teachers at a workshop relating to instructional materials. The director encouraged all the teachers to attend. In fact, he wrote the letters to inform teachers that the specialist from the IML was holding the workshop. He encouraged them to attend. In some areas all the teachers cannot attend the meeting. When this is the case, a representative group is selected.

The other responsibility the State Directors have is to attend the meetings. State Directors should attend the meetings for two or three reasons. One is to show they are interested. If people on a state level are interested in program development, it seems to have some influence on local teachers. If they are interested in instructional materials development then the teachers feel that this is important so they are willing to help. After state directors have done these things, instructional materials specialists should assume the leadership role in developing or organizing the workshop. They have the expertise in materials development, therefore, they should organize and conduct the workshop. When an explanation is made relating to course construction, an attempt is made to motivate the group of teachers. They do not assume this responsibility without some motivation. The group determines what to include in the curriculum materials. When this is accomplished, teachers feel they are going to develop materials to use in their program.

What do they do during the workshop? They develop the major and minor objectives in a general way and the IML specialist states them in behavioral terms. The instructional materials specialist organizes the teachers into groups and assigns areas of work to them. After the teachers are assigned to groups, they assume the responsibilities of developing certain parts of the material.

They develop as much as they can during the workshop which is usually one or two days long. The unfinished part of the assignment is taken home and by a certain time the materials are to be sent to the IML specialist. After their materials are submitted, the specialist arranges it in the proper sequence. If four people work in one area, the specialist takes the work of those four people, puts it together, puts it in the right sequence and arranges it in an accepted format. If there are certain references and other information that was not included then he makes this input. Generally the teachers have it reasonably complete. Once the material is printed the specialist assumes the responsibility of disseminating it to teachers.

There is one other responsibility the IML specialist should assume. He attempts to explain to teachers how the material may be used.

The teachers are happy to see their work. They are happy to know the material is ready for use and they are delighted to get some instruction on how to use it in their programs.

Local teachers contributed by helping to determine what to include in the curriculum and then how to put materials together to be used as units, course outlines, course of study, teacher guides, and the like. They develop a major part of the course content. They do this by using their own experience, in fact, this is an important part of their contribution. There are many good teachers in Kentucky and in your state. They should be used.

They can also make a contribution in helping evaluate materials. After they use the material, ask how they like it. How

useful was it? What changes should be made? They should make their evaluation as soon as possible. Once the specialist gets this information he is in a position to start making revisions and changing the material.

Probably the greatest single influence in curriculum development in Kentucky, as I see it, is the Instructional Materials Lab with the help of local teachers plus the organization and administration of the state department directors. If the personnel in the IML had to develop materials without the help of others, the materials would not be what they should be. Teachers would not use them as they now do. One specialist, in my opinion, cannot develop materials in every vocational area without the help of many other people. I think it is important to get many people involved, and get them to see that they are a member of the team. They are needed and in order to have a good product, they must be a part of the group.

I think this explains how the Instructional Materials Lab in Kentucky is operated.

I believe that instructional materials development is very important. I really believe it can be important in Tennessee and can be coordinated so that there will not be a duplication of efforts. It is important to inform people of what is being developed, and if it is useful it should be disseminated to people who need it. Someone must be responsible for coordinating materials development if duplication is avoided, and if dissemination is successful. In Kentucky the dissemination should be the responsibility of the Instructional Materials Lab. If everything needed cannot be developed, decide what to do. In our "State Plan" for Vocational Education we have written in the plan certain priorities. I brought a copy of our State Plan and written in the plan are priorities that are followed by the IML staff. These priorities were set by directors, Instructional Materials specialists, teachers, and others. The priorities serve as guidelines to follow.

If we are to support curriculum development in the IML by either helping decide on curricula or by developing materials then we need guidelines to follow.

Reaction to questions

We are responsible for developing curriculum materials. The State Department of Education is responsible. Teacher educators in our state are charged with this responsibility. In fact, business and industry furnish some materials that we make available to teachers. Many people in Kentucky make a contribution. With this team approach, I think we are getting useful materials developed.

I moved from teacher education a short time ago and it is a little hard. Teacher educators have many other things to do. When I was in teacher education, I was vitally concerned about other responsibilities. Teacher educators, in my opinion, play a vital role in really deciding on curriculum, kinds of materials that teachers need, and have an important part in getting teachers to properly use instructional materials. Both in preservice and inservice programs I see that they are very important people and more and more they are being very helpful to us. In fact, just two or three weeks ago in the area of graphic arts we had eleven teachers who wanted to develop materials in that area. These people did not want to come in and do this without credit. We are not in the business of training teachers or offering credit. However, an institution was willing to approve a course for this purpose. Our specialist will serve as a consultant to help get the materials developed. In addition to his help, the material will be disseminated by the IML. The material will be developed this summer and will be available by next fall. Teacher education has not done this before. However, more of this will probably be done in the future.

This is the simplest way I know of to explain what we are trying to do in Kentucky. Again, I would encourage you to make sure you coordinate your work in instructional materials development. Someone should coordinate the work so everyone will know what is going on. Someone should also assume the responsibility of disseminating the material so that all teachers will have access to it. Someone should assume the responsibility of helping teachers understand how to use it. Garry this is all I have unless there are other questions.

APPENDIX D

THE DEVELOPMENT OF A STATEWIDE CURRICULUM IN OFFICE OCCUPATIONS

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Paper Presented at the
Curriculum Conference

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Henry Horton State Park
Tennessee

46/47

THE DEVELOPMENT OF A STATEWIDE CURRICULUM IN OFFICE OCCUPATIONS

At a recent national conference of vocational educators, one of the keynote speakers stated "You people in vocational education have no idea how dangerously close you are to losing your entire program to the Department of Labor," and then he went on to list some of the reasons why. Heading the list was the statement "The educational philosophy of meeting the needs of the student and individualizing instruction has been given far more 'lip service' than practice. Much of the curriculum efforts in vocational education have been devoted to the piling up of courses, resulting in layers being added to layers."

Now, I choose to believe you accepted the invitation to this conference because you wish to be involved in the process of program development which, hopefully, will reduce the chances of this "piling up of layers" in Tennessee.

Introduction

Curriculum development based on employment needs is the essence of effective payroll education for the youth and adults in today's world. The nature of change in our society and recent legislation has highlighted the base line essential for solutions to problems relative to the world of work for individuals and the nation. Curriculum development, in the Vocational Education Amendments of 1968, has been identified as a needed force. Requirements of the employers are essential to identifying content for occupational education.

Many of our problems in curriculum development appear to be more in the nature of variety, scope, and sequence. As orientation and informational programs are developed at the elementary and junior high school levels, the need for articulation between levels and all instructional areas will increase, and as articulation between levels takes place, it will reflect the type and structure of programs needed for the pre-vocational, secondary, post-secondary, and adult levels.

As vocational educators we have been in a paradoxical situation. We have gained some laurels on our ability to apply job, content, occupational, zone, and many other techniques of analysis. We have often stopped short, however, in applying what the analyses and studies revealed in planning shop, laboratory, related instruction, and other facilities and programs. In too many cases, many of our curriculum decisions have been made not after analysis, but before.

In the area of vocational and technical education, the need to develop instructional programs for occupations which fall within clusters—in the sense that the skills and knowledges required in one occupation relate in some way to the competencies required in another occupation within the same cluster—has long been recognized. For too long a period we have developed vocational programs around almost single occupational titles. But it is doubtful that we can afford for this kind of planning to continue. Our economy and our whole social order makes it pretty obvious that we can never again afford a lag of 15 to 20 years between the manpower needs of this nation and the educational facilities for meeting them, granted it is difficult to project manpowerneeds and translate them into learning activities.

Today it is very important that occupational groups of job titles be identified from the data gathered in occupational studies. This first grouping must be followed by the further selection of job titles in an occupational cluster, around which the vocational program may be developed, within the cluster, further analysis must be made in terms of job levels. As the occupational titles and descriptions are examined for a job level, the common elements around which an instructional program may be developed are identified and grouped into required occupational learning patterns.

This is the point where we return to the statement about articulation. Through organization of the common elements of diverse occupations, a core of information or cluster of relationships can be established.

The cluster concept as an approach to vocational education is

developing wide interest. A research project based on the cluster concept is presently under way at the University of Maryland, College Park, Md. This project recognized the dilemma and controversy about whether vocational education should prepare highly skilled students for specific occupations or should provide broad programs of general training for a wide variety of occupations. The cluster concept program being developed is aimed at a middle ground between these two points.

Two of the major objectives of the cluster program are:

1. To provide the student with greater flexibility in occupational choice patterns. This provides the student with an opportunity to obtain skills and knowledges necessary for job entry in several related occupations, and also an opportunity to appraise his own interests and abilities in relation to the several occupations in the cluster.

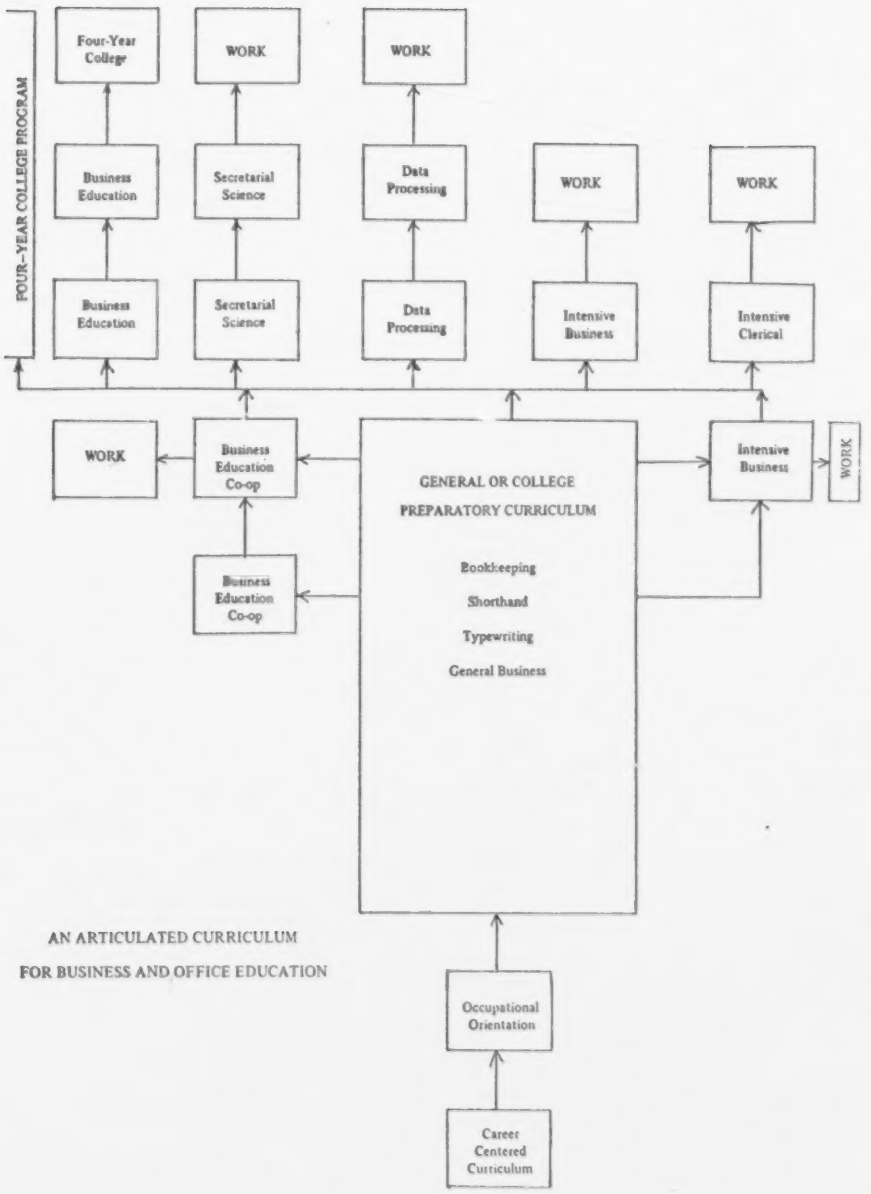
2. To provide the student with vocational competence that affords him a greater degree of mobility. The opportunity for mobility is seen as both geographic and on the job. The skills developed are seen as being both employable and transferable. The student who has the opportunity to prepare in a cluster of occupations will probably be better prepared for technological change. Changes on the job will be expected rather than feared as in the past.

Within this program, the students are prepared to enter a family of occupations. While there is sacrifice in depth compared to specific job preparation, the students retain an element of choice. The program also avoids the danger of closure if any of the specific occupations within the family becomes obsolete or eliminated through technological advance, and allows a relatively easy adaptability as job requirements change.

Not totally unlike the Maryland Project and others which bear relevance to the State of Tennessee, is a project in which Commissioner Dunn has involved personnel at State and regional levels and staff at the Research Coordinating Unit (RCU).

The primary task of this group as seen by the Commissioner is to coordinate planning for this curriculum development project. He asked RCU to develop a plan, pattern, or model for curriculum development and instructional materials development. Because of some very fine work done in the state in the area of office occupations, it is anticipated that the model will be validated in this area. Ultimately, teachers from the junior high, secondary, post-secondary, and adult levels will be involved in reviewing, refining, and writing of instructional materials which it is conceivable may reflect the levels of competency at which students should be able to perform in a cluster of identifiable job titles within the office occupational classification.

Instructional programs based upon the recognition and acceptance of common elements within a family or cluster of occupations should lead not only to increased efficiency in the total instructional enterprise, in terms of maximum utilization of expensive facilities and instructor personnel, but should provide for each worker a pattern of flexibility which should enable him to make adjustments to the rapidly changing occupational requirements. Hopefully, instructional programs developed both qualitatively and quantitatively within the context of a sequentially ordered curriculum will enable vocational educators to reach out to meet and serve the needs and abilities of people, all people, throughout their total life span. This is what curriculum planning is all about and the Silverman technique herein described is but one way.



AN ARTICULATED CURRICULUM
FOR BUSINESS AND OFFICE EDUCATION

APPENDIX E

THE CURRICULUM COORDINATING UNIT FOR VOCATIONAL-TECHNICAL EDUCATION IN MISSISSIPPI

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Paper Presented at the
Curriculum Conference

March 1-2, 1971
Henry Horton State Park
Tennessee

THE CURRICULUM COORDINATING UNIT FOR VOCATIONAL-TECHNICAL EDUCATION IN MISSISSIPPI

There is nothing I enjoy more than talking about my job and what it involves. I will admit, first of all, that I came here highly disorganized; that mine will not be anything like an organized presentation. When you pour a jigsaw puzzle out on the table, it will appear to be a disjointed, disarrayed kind of mess. But we who work in the Mississippi Curriculum Coordinating Unit for Vocational-Technical Education have attempted to put some things together which we think have a sound theoretical base.

Our work fits into many different kinds of theoretical constructs. We are concerned with diffusion of better vocational information. We are concerned with helping to structure better vocational programs. We look upon curriculum development as being an all-inclusive kind of concept as opposed to only instructional materials preparation (instructional materials preparation being only one part of our work).

In curriculum development, we are even concerned with teacher education and the degrees held by teachers; but more specifically with the expertise held by teachers, as opposed to degrees held by teachers. In trying to articulate all of these various kinds of things, our state director merged two already on-going materials laboratories. We have had a materials laboratory in the Agricultural Education Department since the thirties. This was known as the Agricultural Education Subject-Matter Service, and for you people who are agricultural educators, you have probably seen some of the materials produced by that agency.

In the Department of Industrial Education, they had a curriculum materials laboratory and many of the documents you see on the back table were produced by that agency. Mr. A. P. Fatherree, our State Director of Vocational and Technical Education, about a year and a half ago, decided that it would be wise to consolidate these efforts. This came about because of his insights into the

work of the Research Coordinating Unit, the problems surrounding planning, evaluating, and coordinating teacher education with all other aspects of the vocational education program in Mississippi. So, without spending a tremendous amount of time on the history and development of the CCU, I will merely say that about a year and a half ago, these two agencies were combined and named the Curriculum Coordinating Unit for Vocational-Technical Education. The Curriculum Materials Laboratory in the Industrial Education Department had been on-going about six years. The Agricultural Education Subject-Matter Service had been on-going for about twenty to thirty years. But they had never had more than one man in the Agriculture section; they had about four in the Industrial Education Curriculum Materials Laboratory.

When we consolidated, Mr. Fatherree gave us much encouragement and support, financially, verbally, and otherwise, to continue. We now have, according to the table of organization (see page 71) quite a number of positions in the CCU. I serve as the Director. The Assistant Director is Dr. Jasper S. Lee, who also is an agricultural education specialist with a doctorate. His degree is from the University of Illinois, and he is the only person on the CCU staff who has a terminal degree, in addition to myself.

Notice on the dotted line the relationship of the RCU to the CCU. There are two of us in the RCU; myself and Jim Shill. Dr. Shill has a Ph. D. from Louisiana State University, so we have a two-man RCU. We intend to keep it, as some people would say, a small unit. We are a coordinating unit, but we do conduct some evaluative research studies. For the most part, we prefer to use available research money to contract for research with other departments on the campus as well as some of the other institutions of higher learning in the State of Mississippi.

Persons filling the CCU positions are called Curriculum Coordinators. We have a Distributive Education Curriculum Coordinator, a Cooperative Education Coordinator, a Home Economics Coordinator, and Dr. Lee, our Assistant Director, acting as the Curriculum Coordinator in Agricultural Education. We have two Curriculum Coordinators in T & I, one is an elec-

tronics specialist; the other is a building and trades specialist. We do not have a Curriculum Coordinator in Technical Education at this time, nor do we have a Curriculum Coordinator in Occupational Orientation. We have a young man who is currently acting as a Research Assistant, and we are hoping that this position might be filled by him when he finishes his degree at the University of Southern Mississippi. We do not have a person in Business and Office Education, but we hope to add one.

Notice that we have a full-time film librarian. We have about 1800 films in the CCU film library. Our film librarian schedules films, supervises the cleaning and repairing of these films, sorts them, retrieves them, and manages that particular aspect of this entire operation. This past summer we received money for purchases of materials for the Cooperative Education program. We spent some $20,000 on transparencies, making up sets of transparencies which we will lend, as we do films, until we get equipment needed for duplication of transparencies. That will give you an idea of the magnitude of the work of the film librarian. There have been approximately eight weeks, since September of this past year, when we have sent out and received back more than 100 films per week.

The CCU has an editor who has English grammar expertise. She is employed one-fourth time. We are hoping to get an artist-illustrator, because we need this type of help.

Mr. Fatherree agreed to let us have a publications coordinator. The publications coordinator had spent about six years in a printing shop in Jackson. He is very knowledgeable about printing and printing machinery, as well as duplication, binding, mailing out, collating, and all of the other operations that go with the production of materials. He, in all probability will become our CCU administrative officer, since he has a B. S. Degree in Business Administration. He is now setting up a bookkeeping system for us, because we will have the RCU and the CCU budgets as of July 1, along with three other projects which are somewhat smaller, around $10-$16,000 each. The publications coordinator will help with the management of these budgets.

We spent some $70,000, as I indicated before, on cooperative materials this past summer. These materials were received, sorted, and sent out to various schools. It was easier for the CCU to perform this service than it would have been for the State Staff, since we have room and part-time student help to do such jobs. We pay minimum wage to students and we get very good work from them. There are a lot of students who need this kind of work. It is not too hard on our budget, because most of our student help qualify under EOA—we pay 20 percent of their hourly wage, and the Government pays the other 80 percent. Our publications coordinator is also supervisor of our part-time help. When the students are not helping the curriculum coordinators, they work for him. I am giving you this in detail so that you will get some idea of the manner in which we work. To conduct our daily routine, we have an office manager, and at least two secretaries now, and possibly another one to be added. We have about six students working part-time in the CCU.

You will notice that I have not said much about the curriculum writers. The CCU staff members are not only compilers; they are writer-compilers, or curriculum coordinators. When I get into the process of how we develop our materials and diffuse them, then you will see that staff members are curriculum developers and curriculum coordinators, as opposed to merely writers. In other words, they go out and work with the teachers in the schools.

Do you have any questions now about the structure of the CCU and its relationship to the RCU? I prefer to respond to questions as I go along, so if you have any, please hold up your hands. I usually get by a little better that way than when I try to carry the ball alone.

Question: The curriculum coordinators of various services and functions, as I understand you to say, are collectors of materials. Do they go out and find what is in the field and make these findings available to the teachers?

Answer: As soon as I get through with the objectives, I am going to get into the process through which they go. Your question will be answered as I elaborate the process. I think it is a

flexible structure or process. It is well designed and most of these materials go through the same process. The process is one of researching, validating, authenticating, compiling, revision, editing, and on through diffusion.

Question: You referred to Mr. Fatherree. I notice that you have him connected here on the chart by a dotted line. Please explain this relationship.

Answer: From a financial standpoint, it means that for all intents and purposes, the CCU is jointly sponsored by MSU and the State Department of Education. MSU puts up approximately 25 percent of the total budget each year, and the Division of Vocational and Technical Education puts up approximately 75 percent. Some of the State Department's share of the money comes from the federal government, as federal funds, so that the budget for the CCU is on a 50-50 matching basis. In other words, the state puts up 50 percent and the federal government puts up 50 percent.

From an administrative standpoint, for all intents and purposes, strict administration is through the University. By this I mean that our paychecks come from the University. This arrangement has been made through an agreement between MSU and the State Division. We recommend staff members to the State Director and receive his approval before employing anyone on the CCU staff. We do not hire anyone without his approval. This has been the manner by which we handle personnel, and it will continue. Our relationship has been such that we work very closely with the entire State staff. This is an absolute must. We at the University are not a separate entity or agency. Vocational education is a concept and a discipline, and it is a program administered primarily by the State Staff throughout the state. The ultimate responsibility for providing these ancillary services rests with the State Director. One of several reasons why the CCU is located on the MSU campus, rather than in Jackson, is that our relationship with the State Staff is such that the State Director does have the necessary control to guarantee quality and efficient ancillary or curriculum development services from the CCU.

The CCU is cooperatively sponsored, funded, and administered by the State Division of Vocational-Technical Education and the University. Our closest contact on the State Staff is the Coordinator of Research, Curricula, and Teacher Training, as you saw on the Table of Organization. He is our State Department contact. He helps us with the budget, and about this time each year, when we begin to make budget revisions, he helps us tremendously in getting administrative approval for changes.

About five and a half years ago the RCU was made a part of the State Staff, and about two years ago the CCU, even though each is housed on a separate plot of ground. They are working for the same purpose, and that is to improve vocational education in the State of Mississippi. I may stand here and tell you this, but you will have to come see it in action to really realize the close relationship that we have.

The CCU has service, research and teaching responsibilities which are met through performance of the following major functions. I choose to call these functions, as opposed to objectives. We are trying to establish and coordinate a leadership structure for determining priorities in curriculum development.

The idea of establishing priorities is not something that we can do sitting in the CCU offices. Nor do I think that the State Staff can do this totally by sitting by themselves. This is not an individual matter. We have, for each of the curriculum coordinators, a committee that serves as an advisory committee to them. This advisory committee is composed of teachers and educators, as well as business men and the other kinds of people, such as industrialists. For example, in Home Economics we have a person on the Advisory Committee from Holiday Inn in Memphis, and a person from the Mississippi Restaurant Owners Association. Our Distributive Education coordinator has a very similar kind of committee, with representation from businesses, organizations, agencies, entities, etc. Once we got into the curriculum development process, we felt that we needed to provide leadership for inventing solutions to curriculum problems.

Part of the work of each curriculum coordinator in his design,

or his interpretation of the discussions of this advisory committee which frequently is reduced to writing for discussions in our weekly CCU staff meetings. He lays it out on a piece of paper in the form of a tentative solution. It is a design on paper as to what he thinks ought to be. To design or systematize parts of curriculum materials and programs, and produce the written documents that you see in the back is merely one component in the overall curriculum development scheme. All other components, such as overlay transparencies, slide series, and films are supplementary or complementary parts. So these are in total, the component parts.

To help provide leadership for diffusion and dissemination and demonstration of curriculum programs, we assist the State Staff to conduct meetings. For instance, on Monday, Tuesday, Wednesday, and Thursday of this week, we are holding four workshops throughout the state to disseminate these materials on Catfish Farming. Some of you may not have seen this on the back table, but it is the latest document published in the Agricultural Education section in the Curriculum Coordinating Unit. It is being taken to four different meetings throughout the state, and all of the agriculture teachers come to these meetings. They are meeting in only a one-day session this time, but these meetings are frequently enough with the teachers that the process of diffusion is pretty well known to all. When the materials are gone over, and the teachers' questions are answered, there may be a need for some follow-up meetings on these materials. It depends on the reactions that we detect through the State Staff and people who are in first-hand contact with the agriculture teachers. If the State Staff sees the need for it, we then have a follow-up meeting. This is part of the diffusion, dissemination, demonstration process, but probably not so much demonstration as diffusion.

There is a difference between diffusion and dissemination. Dissemination is merely mailing materials, or distributing them. Diffusion is taking them out in a workshop session, ironing out difficulties which teachers might encounter in utilization of the materials. Teachers also had a part in the process of development of the materials. So you can see where diffusion is enhanced by working with teachers in the development of materials.

We have done evaluations of curriculum programs, but not a lot. We are presently performing an evaluation of our occupational orientation program which we started a year ago last September in 265 different schools. This evaluation was begun too soon after we had spent only three months writing the materials. But we need to do much more in the evaluation of our materials. One reason why we want to see the RCU tied closer to the CCU is to provide communication and feedback structure between local school curriculum practitioners and curriculum developers in the CCU. The manner by which we do this, of course, will be primarily through our diffusion efforts. We have been working and spending time with teachers getting feedback in that regard.

We maintain intensive interaction with research and development activities with the RCU. We are doing this primarily by putting the RCU in the same building with the CCU and administering it in the same manner. Any quick questions about the functions of the CCU?

Question: Your curriculum coordinators are on the University staff, and you teach in the University. Is that right?

Answer: Right now the CCU staff members have teaching appointments in various departments of vocational education. For instance, when I came to MSU in 1965, I asked for and received a teaching appointment in the Department of Industrial Education. Since the Department of Agricultural Education is in the College of Agriculture instead of the College of Education, I decided that I would prefer a teaching appointment in the Department of Industrial Education in the College of Education. I have many reasons for that, namely, I have been associated with departments of agricultural education in both colleges of education and in Education. That opens up a whole argument that we could spend days on. There are a number of reasons why I feel that way.

Jim Shill and Jack Lee, the Co-Director of the RCU and the Assistant Director of the CCU, have teaching appointments in the Department of Agricultural Education. So we have representation in two different teacher education departments. Some

of our other curriculum coordinators have Master's Degrees, but they do not have teaching appointments yet. We are working on this; we are trying to get them in a position to teach some of the undergraduate level courses. But this is not finalized yet. We are hoping to get started on this in the near future. Are there other questions?

Question: What part of your time is devoted to teaching?

Answer: From the standpoint of my salary, none. But I teach one course per year, free. That is what we call research subsidizing teaching. That's another story.

I feel that I need to teach some because I will become exceedingly stale if I don't have direct contact with some teachers now and then. I would like to teach one course each semester, but such has not been possible. I get a tremendous amount of feedback when I do teach and this helps me articulate some of the problems and gives me an insight into some of the problems that teachers face. It is an absolute must that researchers and curriculum coordinating unit people get out and maintain first-hand contact with people in local school systems. As you can see, I am local-school-system oriented. I can tell you later about an evaluation program for local programs of vocational education that we worked on. The Social Science Research Center is community-sociology-oriented, with their focus directly on the community. After all, these are the people who do the job. We in the CCU and RCU are the supporting kinds of people.

Staff development is a very strong drive of ours. Right now one of the people in the CCU is on sabbatical leave at the University of California at Los Angeles working on a doctorate, and we have established a sort of precedent there. This is the first time we have had a staff member to get sabbatical leave. So we are working out a number of administrative policies and entanglements that I think are going to improve the staff development picture later on. I have a number of other people who want to study for advanced degrees. We had one young man on our staff who is now at the Center at Ohio State University. He is not on sabbatical leave, because he had not accumulated six years of work at Mississippi State University; he had only been

there about three years. He is on leave without pay.

This document, which is about three or four years old, is called "The Role of a Curriculum Laboratory in Support of Vocational-Technical Education." It was written by one of our coordinators of the curriculum laboratory in the Department of Industrial Education at Mississippi State. The paper has a little about the role of communications and some of the objectives that contribute to this role. He iterates and reiterates the idea of communication with industry; maintaining a close tie with businesses, industries, people who work in agriculture, and people who have first-hand experience and knowledge about industries and business. This is not easy, but it is an absolute must. We as educators talk among ourselves. We as vocational educators, particularly, sit and talk among ourselves. We simply need the experiences that people in industry have gathered and gained on a first-hand basis with their problems. We feel that this communication needs to be strengthened and maintained and worked on at all times.

To deviate just a little from some of the things that are in this paper, there is some mention of units of training. For instance, you will notice that much of our agricultural materials have been resource units. Also notice that most of our instructional materials in industrial education, or T & I, have been primarily teachers guides, job sheets, basic plans, etc. So we have a slightly different approach for each of the disciplines or sub-disciplines of vocational education that we are working on. I am not sure whether everything is laid out in this paper the way we originally planned it.

The first step is to try to establish the priorities. Once we get a priority established, such as the need for a teachers guide in distributive education, or a coordinators handbook, the curriculum coordinator comes back to his office and begins searching and researching. He searches literature; he writes to other curriculum coordinating units, or other curriculum development laboratories, or instructional materials laboratories, of which he has knowledge. He does everything he can to compile and bring together the written documents. It is an educational process on his part. The method by which our people do this is very good.

They know personally, people who are working on certain kinds of things and they can write to them and get first-hand information. You can see what kind of knowledge this requires. This requires that the curriculum coordinator on our staff be aware of things that are in the developmental stage. This is why I encourage the people to go to AVA, AVIM, AVERA meetings and to visit labs in other states; talk it up, in other words. He must stay aware. If he doesn't, then he is not going to be able to research and compile this material very adequately.

About the time priorities are established using his advisory committee, he normally will either use the advisory committee or will establish separately an ad hoc committee of teachers who will assist him in taking the materials that he is compiling and establish a format. This format is usually in outline form, if it is to be a written document. He does this in outline form as detailed as possible. For any of you people who have written a document, outlining it is the most difficult step in the process. When you get it outlined, you can shift it back and forth, but you have to get something down on paper. It is a roadmap. It is a model, because you are trying to include all things that you think should be in there. The ad hoc committee of teachers then are brought together. This ad hoc committee is pulled together to assist in developing this format. They pass judgment on it. Usually the rough draft of an outline is mailed out to them in a week or two, before they come together to convene at the CCU offices and sit down to discuss it in detail. After they have discussed it and suggested the changes they feel necessary, the curriculum coordinator takes the material and their suggestions and begins writing as they have indicated that he should.

One of the things that we are building in that particular step of the process is receptivity to the material on the part of the teachers. We can write and print it up without help or outside judgment, but there is too much of that kind of thing going on now, and we choose not to do that. We choose to build receptivity or acceptance. In actuality, these numbers of heads working together make the documents a lot better than if only one man did all the thinking and all of the writing and all of the compiling, and then going out and disseminating and saying, "Here it is."

We try to get all of the components in proper perspective and relationship, but the parts have to be inserted at the right place.

Once we get a rough draft copy of the format, we usually mimeograph a few copies. Then we invite the technical experts from industries and businesses. This may be either an ad hoc committee, or it can be composed of some of the members who served on the advisory committee who helped establish the priorities. We invite people from all over; they are eager to help. We ask the technical-level people to come in and help us authenticate the materials that we have and help eliminate errors. These people help us by suggesting where changes can be made. Where errors are made, they simply must be eliminated. They help us to update subject matter, and this is something important, especially in fields such as electronics, or other rapidly changing fields.

After we get the technical-level work performed, we then develop a rough draft of the document and take it out to the teachers and ask them to try it out for a year. This is the ideal. Once we get the try-out performed, if the document requires the revisions that are normally required, we bring it back and revise the whole thing and reprint it in sufficient quantity to give a copy to each of the teachers in the state and to people on the State Staff. If it is disseminated outside the state, we normally charge a fee. It is only a fee that will cover the mailing and production costs. I will get into that particular kind of relationship with other states in just a few minutes.

So, you can see where development and diffusion of materials fall into place. In other words, these CCU staff members are specialists, not only in compiling, but also in the overall area of diffusion.

I guess that is the process for this document. There are a couple of other things that I would like to mention. Then I would prefer that you begin thinking of some questions that you can ask.

The first thing that I want to mention is that we in the CCU

would like to participate in a cooperative, reciprocal arrangement with similar professional materials development agencies in other states. We do have an arrangement already in agriculture in the Southern Region, with individuals preparing subject matter materials in agriculture in the Southern Region. This document lists all of the people in the Southern Region who are presently in the business of preparing agricultural materials. We do not have this kind of listing in T & I, but I think we should have. I suspect that Texas is doing more in D. E. than any other state I know of, in the development of curriculum materials.

Another thing I want to mention is that we do not develop anything in the CCU that we can get elsewhere and adapt for our use in the state. Either we buy it in bulk numbers to disseminate, or we buy it with special permission to adapt and adopt and send it out to teachers in the state. We do not go through the long creative process of originating and generating a special document if we can purchase it elsewhere. Cost is a factor also to be considered here.

Instructional materials should be developed by personnel who have the same level of professional expertise, education, etc., as teacher educators and research personnel. The curriculum coordinators should have a minimum of three years of teaching experience in high school or in technical education. We are not after persons who are, you might say, not in the habit of doing a lot of desk work and writing. We must have the kinds of experience that classroom teaching affords. We cannot do without it. We don't hire anyone who doesn't have classroom teaching experience. Instructional materials personnel need professional appointments in the appropriate departments. We are working on this.

I mentioned the use of advisory committees to set priorities to aid in the publication format and style; to aid in authentication, and the utilization of other kinds of people for authentication and verification, and validation of subject-matter content. We need to provide a greater variety of supplementary materials to accompany a given publication. In other words, things like films, transparencies, etc.

I will give you an indication of what our publications coordinator did when he first came. We have an AM 1250 Multilith press. This press is somewhat limited, but it does a pretty good job, if you know how to use it. He ordered a small amount of attachments for the press, and we now can mass produce transparencies for diffusion to all our teachers.

We have been compiling quite a sizable library; this takes money. The reference library is quite extensive now, and we are adding to it every day. We choose to get things in the reference library that are not found in the main library on campus. The University Library also is another advantage of having the CCU and the RCU located on the State University campus.

On the back side of this report, (showed six-months CCU report) is a financial report. There was a total amount spent of about $62,000. The State Division put in about $52,000 of that, and Mississippi State University, $10,000. So you can see, relatively speaking, about the size of the finances on a six-months basis. Our budget this year was $147,000. We need to staff all of the positions shown on the organizations chart. We are always looking for just the right people to fill these positions.

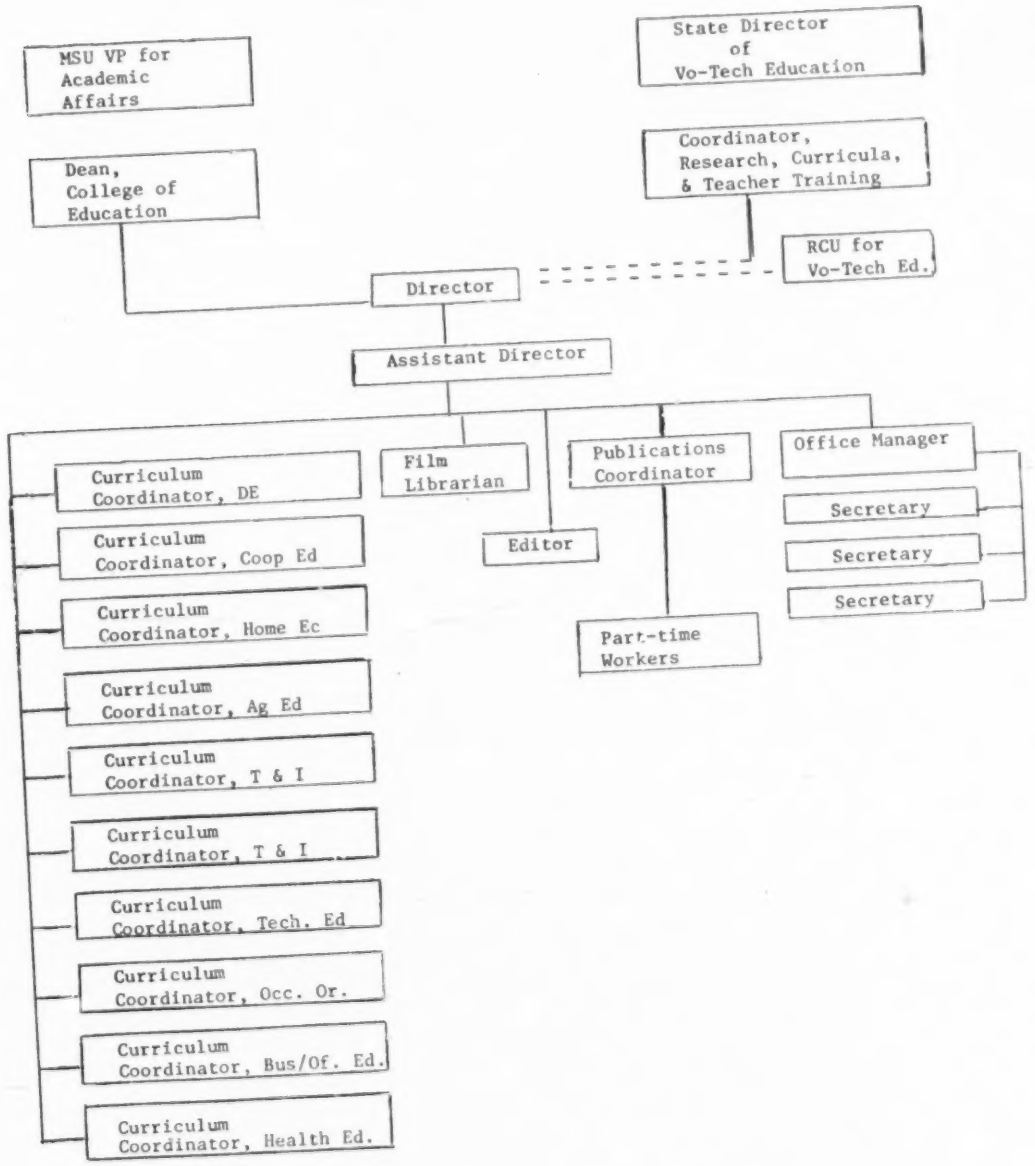
Mr. Fatherree has agreed to give us all of the lapsed salary money to buy equipment this year. So we are extending our capabilities; we are extending our office work; we are also buying some film-cleaning equipment. These are the kinds of things we are focusing upon. We expect a lot more staff development. As long as we are serving the Vocational-Technical Program of the state, I think we are in a very good situation. We have received tremendous cooperation from the teachers and the State Staff. I would like to answer any questions that you might have.

Question: Is this program, as I understand, centered only on local needs and statewide needs? In other words, is there any particular need for curriculum development on a national level? Is there any advantage to assign anyone to work on that kind of thing?

Answer: Yes. We need about six regional curriculum development units in the U. S. These would prevent overlap and duplication of effort. They could provide the kinds of coordinative structure that would guarantee quality materials available to all teachers of vocational education.

CURRICULUM COORDINATING UNIT FOR VOCATIONAL-TECHNICAL EDUCATION

Organization Chart



APPENDIX F

A SUGGESTED CURRICULUM DEVELOPMENT APPROACH FOR TENNESSEE

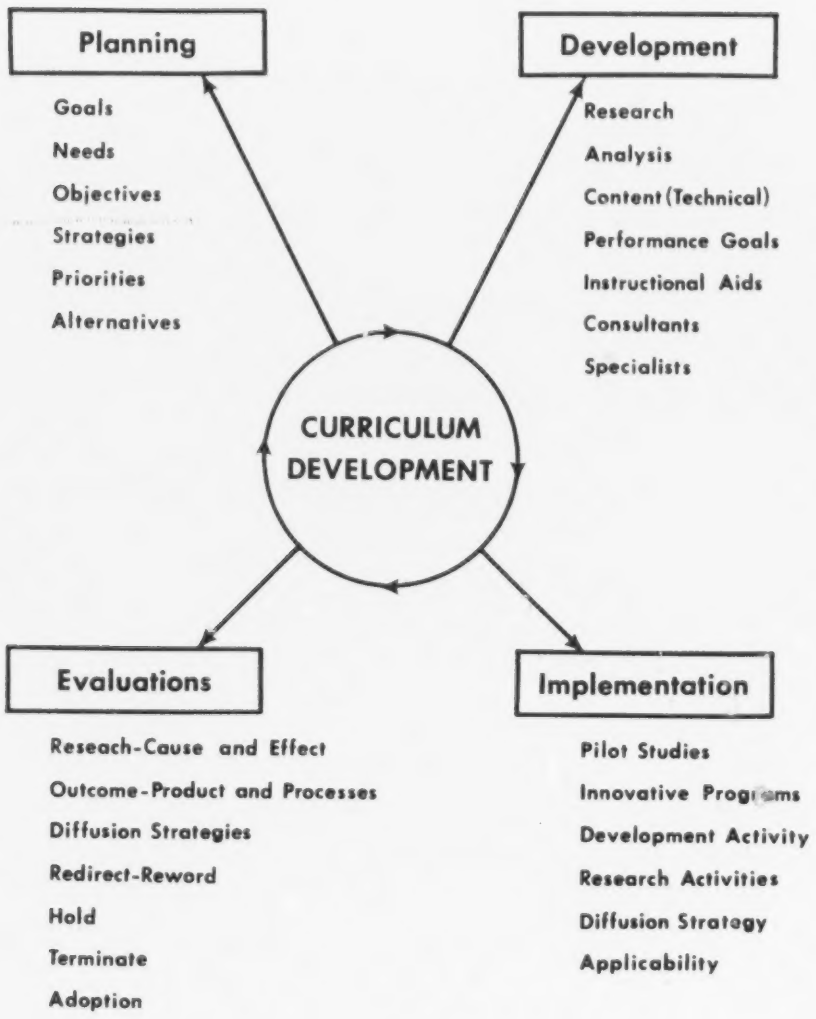
Lynn Bevins
Director
Vocational Curriculum Laboratory
Murfreesboro, Tennessee

Paper Presented at the
Curriculum Conference

March 1-2, 1971
Henry Horton State Park
Tennessee

78/79

ASSESSMENT OF CURRICULUM DEVELOPMENT



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The factors making up the total picture of curriculum development presented here are not intended to be the answer to Tennessee's problem in Curriculum Development, rather they should be used only as a point of departure and as a stimulus for securing additional answers to our problem.

For our consideration here, total curriculum is presented in four phases. Planning, Development, Implementation and Evaluation. Each of these is a large area and no attempt is being made to expand them in detail. Some key factors will be mentioned for consideration.

I. Planning

A. Goals

A long-range ultimate aim of the program of Curriculum Development must be stated. In stating these goals some measure of progress must be established in order to answer the problems and to assure the problems are being met and solved.

B. Needs

Needs must be identified in order to do any work toward meeting them. These needs may be personnel, resource materials, budget, physical facilities, coordination of effort, or even allotted time blocks for available personnel and facilities. The needs encompass all these areas now lacking in order to meet the goals of Curriculum Development. Unless these needs are identified and documented, efforts to meet them will probably be ineffective.

C. Objectives

An objective is a measurable increment toward reaching a goal. The objectives must be specific with close attention given to the results expected. They must be realistic and fully understood by all involved.

D. Strategies

The plan of attack becomes important at this stage. Even when we recognize all the facets of the total problem we will accomplish very little unless we systematically work toward a solution.

E. Priorities

All the work cannot, and should not, be accomplished at one time. Good planning will give weights to the various elements of the task. Establishing priorities can prove to be a difficult problem because that which is of first importance to one group might be far down the list to another group. This again points up the need for complete understanding of the total task, rather than its smaller elements, by all personnel involved.

F. Alternatives

Throughout the planning and execution of Curriculum Development we should consider and incorporate alternate plans for accomplishing the task at hand. This assures us that if we fail in one approach another is ready to be tried, thus delays and frustrations are held to a minimum.

II. Development

A. Research

Most of us shrink from the usage of the term research. We like to assign this task to research specialists at the RCU and then utilize their findings in our work. Each of us are involved in research to some extent whether we like to admit it or not. Research, as used here, is rather simple in nature, but most important to the total task. It may be seeking new material, com-

piling and cataloging existing materials, determining availability of existing material and examing the cost factor. It definitely will include the desires of the instructors involved who will ultimately be using the materials developed. In short, done properly, it shows where we are and what we need to do to meet existing needs.

B. Analysis

When vocational educators use the term analysis we almost automatically think of Job Analysis. In curriculum development this is only one part of the analysis to be made. There are many other factors involved. The types of programs being prepared for, the instructors who will be using the materials developed, the types of schools in which the programs will be offered and the classification and availability of students. In addition, the total program of the school must be considered and how the vocational offerings fit into the total objectives established for that school's community.

C. Content (Technical)

What are we going to teach? This question is the one that most often is not answered in specific terms. The program title too often suggests the broad base that curriculum materials attempt to cover. Here specifics must be identified and dealt with. End goals, exit points, explicit job requirements all must help determine the make up of the technical content.

D. Performance Goals

Content of curriculum materials is greatly influenced by performance goals. Where do we want our students to be at any given point in the vocational instructional program? We must determine the entrance levels, the

exit points, performance standards of the industry and the growth potential of the job within the industry. We must determine whether the job performance requires single or multiple skills. The performance goals then become one of our measuring devices. These goals must be realistic and attainable.

E. Instructional Aids

Should we develop excellent technical content in adequate quantities, would it be worth much without accompaning instructional aids? A skilled brick mason with the needed brick and mortar would have great difficulty building a wall without a trowel and level. Instructional aids are also important to compliment curriculum materials. The total packet of curriculum materials not only must have the technical content but will need reference books, technical manuals, overhead transparencies, slides, films, charts, mock-ups and any other aids needed to make the presentation of new information effective.

F. Consultants and Specialists

After determination is made concerning what we are going to develop and how we are going to do it we ask, Who is going to do the work? In addition to utilizing the permanent staff proposed for the work in curriculum development and the instructors there will be need to use, on occation, consultants and specialists in the occupational field in question. Already in our initial efforts in curriculum development we have experienced the willingness of industry and labor to cooperate with Vocational-Technical Education. In any area of curriculum development these groups are excellent sources to contact for the added expertise needed to accomplish our goals.

III. Implementation

After the plans have been made and the basic development activities have been initiated we must put the materials out for use and further development. Some of these activities are suggested.

A. Pilot Studies and Innovative Programs

Through pilot studies and innovative programs short comings of curriculum materials are quickly identified. Working closely with instructors the curriculum specialists can add to, delete, rearrange and make curriculum materials compatable with the learners and the industrial community.

B. Development Activity

As used here development indicates a continuing activity. Due to the rapid changes in the various subject areas a packet of curriculum materials can never be considered finished or complete.

C. Research Activities

Research as related to implementation again suggests a continuing activity. As specific needs are indicated we must seek additional resources.

D. Diffusion Strategy

This is perhaps one of the weakest links in curriculum development. Usually material is handed to an instructor, or is mailed to him, and the task is considered completed. Nothing could be farther from the truth. Even though the teachers are involved in the original development activities the curriculum material needs to be carried to the various groups of teachers by a member of the Curriculum Laboratory staff and a conference conducted with the instructors

on the contents and proper use of the curriculum materials. Even this will not guarantee one hundred percent usage, but will eliminate most of the instructors putting these new materials on the shelf without at least giving it a trial in the shop or classroom.

E. Applicability

The instructor is the chief source of information with which to answer this question. As his program is visited by the Regional Supervisor and Curriculum Specialists basic questions can be answered. Is the material adequate for the present? Does it fit the program objectives? Is it easy to use? Are the teaching aids appropriate and helpful in presenting new materials and procedures? Is student reaction favorable? The answers to these questions should give direction for continued action in curriculum development.

IV. Evaluation

Evaluation must be a continual process also. Listed are some of the elements of evaluation to be considered.

A. Research - Cause and Effect

The word research again - but this time finding out what we have developed in the way of curriculum materials. Why did we choose to develop it? What processes were involved? What effect did it have on our vocational education program?

B. Outcome - Product and processes

Are we satisfied with the product? Were our methods of development effecient or should we change? Unless we can realistically study the product and how we produced it we are not apt to try to improve either the product or the process.

C. Diffusion Strategies

Note whether our diffusion methods are working effectively, putting the materials where they ought to be, teaching those involved how to use it. Review the level of performance goals. Review the number of programs effected. Materials that are not in use fail to help the student.

D. Redirect or Reword

Basically, the materials developed may be sound, but we may need to redirect the materials toward a different type of program or reword the content to better meet existing conditions.

E. Hold, Terminate, Adopt

At this point in evaluation the last three items are grouped as only one will apply. If the material is reasonably sound at this point but the instructional program is not ready to incorporate it into the activities we may place the packet of curriculum materials in a "hold" status. If it fails completely to meet the needs it can be terminated at this point, or just the opposite - if it is fulfilling a real need it should be adopted for use in all programs of that area.

As illustrated in the print of the transparency these factors listed are both independent and overlapping. We can begin work at any given point in the cycle and progress logically to the next factor. The object of the arrangement is to clearly indicate the task of Curriculum Development is a never ending process if our instruction is to be up-to-date and effective in producing graduates with the knowledge and skills required to meet industrial demands.